

**AMENDMENTS TO THE CLAIMS**

Please amend claim 2 and add claims 10 through 14, as follows:

1           1. (Original) A cathode material for an electron beam apparatus, the cathode material  
2 consisting essentially of:

3           a rare earth metal of the cerium group comprising 0.5% to 9.0% of the total weight of the  
4 cathode material;

5           at least one element selected from the group consisting of tungsten and rhenium, comprising  
6 0.5% to 15.0% of the total weight of the cathode material;

7           carbon comprising 0.5% to 10% of the total weight of the cathode material; and  
8           iridium.

1           2. (Currently Amended) The cathode material of claim 1, with the rare earth metal of the  
2 cerium group being at least one element selected from the group consisting of ~~lanthanum~~ lanthanum,  
3 cerium, praseodymium, neodymium and samarium.

1           3. (Original) The cathode material of claim 1, with the carbon content being 2% to 5% by  
2 weight based on the total weight of the cathode material.

1           4. (Original) The cathode material of claim 1, with about 6% by weight of a rare earth metal

2 of the cerium group, about 5% by weight of tungsten or rhenium or both tungsten and rhenium, and  
3 about 3% by weight of carbon, based on the total weight of the cathode material.

1 5. (Original) A cathode material for an electron beam apparatus, comprising:  
2 a rare earth metal of the cerium group;  
3 at least one element selected from the group consisting of tungsten and rhenium;  
4 carbon of about 0.5% to about 10% of the total weight of the cathode material; and  
5 iridium.

1 6. (Original) The cathode material of claim 5, with the rare earth metal of the cerium group  
2 of about 0.5% to about 9.0% of the total weight of the cathode material.

1 7. (Original) The cathode material of claim 6, with the carbon content being about 2% to  
2 about 5% by weight based on the total weight of the cathode material.

1 8. (Original) The cathode material of claim 6, with at least one element selected from the  
2 group consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight  
3 of the cathode material.

1 9. (Original) The cathode material of claim 8, with the carbon content being about 2% to  
2 about 5% by weight based on the total weight of the cathode material.

1           10. (New) The cathode material of claim 2, with the carbon content being 2% to 5% by  
2 weight based on the total weight of the cathode material.

1           11. (New) The cathode material of claim 2, with about 6% by weight of a rare earth metal  
2 of the cerium group, about 5% by weight of tungsten or rhenium or both tungsten and rhenium, and  
3 about 3% by weight of carbon, based on the total weight of the cathode material.

1           12. (New) The cathode material of claim 5, with the carbon content being about 2% to about  
2 5% by weight based on the total weight of the cathode material.

1           13. (New) The cathode material of claim 12, with at least one element selected from the  
2 group consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight  
3 of the cathode material.

1           14. (New) The cathode material of claim 5, with at least one element selected from the group  
2 consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight of  
3 the cathode material.